

REMARKS

Reconsideration of the above-identified application in view of the amendments above, and the remarks following, is respectfully requested. Claims 1-9 are in this case. Claims 1, 2, 4 and 6 have been rejected under § 102(b). Claims 3, 5 and 7-9 have been rejected under § 103(a).

The Applicant believes that the claims before the Examiner now correspond substantially to allowable subject matter, as will be detailed below.

Rejections

The Examiner has rejected claims 1, 2, 4 and 6 under § 102(b) as being anticipated by U.S. 5,457,471 to Epperson, Jr. (Hereinafter "Epperson") and claims 3, 5 and 7-9 under § 103(a) as being unpatentable over Epperson. The Examiner's rejections are respectfully traversed.

While continuing to traverse the Examiner's rejections, and without in any way prejudicing the patentability of the rejected claims, the Applicant has, in order to expedite the prosecution, chosen to amend independent claim 1 to include the limitation of the attachment arrangement being configured "such that a release of said main body from the projectile is at least partially non-ablative". This limitation is disclosed in the originally filed application on page 6, line 16 to page 7, line 8, where attachment arrangement 16 is described as a cord which secures main body 14 to projectile 10.

The claims of the present invention are directed toward a soft removal thermal shield for protecting a heat-sensitive element of a projectile. The heat sensitive element is disposed behind a window of the projectile. The shield comprises a main body and an attachment arrangement for releasably connecting the main body of the

shield to the projectile thereby covering the window and protecting the heat-sensitive element behind the window. As the projectile approaches its target, the thermal shield is released by releasing the attachment arrangement from the projectile. At release, the main body of the shield is sufficiently soft so that if the shield were to make contact with another part of the projectile, it would not damage ("substantially harmless" in claim 1(a)(iii)) the projectile.

Epperson teaches a Radome 10 having an inner conical shell 16 and an outer ablative layer 18 (column 3, lines 18-19 and 48-50). Ablative layer 18 is bonded to inner conical shell 16 (column 3, lines 48-50). Shell 16 is made of any of the convention radome materials, such as PYROCERAM 9606 material or composite materials (column 3, lines 23-25). Radome 10 protects a sensor 12 (column 2, lines 64-67). At the same time radome 10 does not block communication with sensor 12 (column 3, lines 16-17). During flight, radome 10 heats and inner conical shell 16 expands (column 3, lines 29-30). Outer ablative layer 18 is designed to ablate at high temperatures. Radome 10 is not designed to be released from the missile as it affords protection to sensor 12, as described above. Ablative layer 18 is formed by spray painting shell 16 (column 4, lines 42-47).

First, claim 1 of the present application does not read on radome 10 of Epperson, as the main body of claim 1 is "sufficiently soft upon being released from the projectile during said flight that said main body is substantially harmless to the projectile after being released", whereas radome 10 of Epperson is a hard radome. If the radome 10 of Epperson were released it would probably destroy the missile (see U.S. 6,679,453 to Steiner (column 8, line 51-54), cited by the Examiner).

It should be noted that radome 10 of Epperson is not released, rather ablative layer 18 ablates away from radome 10 during flight of the missile.

Radome 10 of Epperson is described as hard/rigid in Epperson, as follows:

“In addition, the radome must be rigid” (column 1, lines 18-21); and

“shell 16 is made of any of the convention radome materials, such as PYROCERAM 9606 material or composite materials” (column 3, lines 23-25), PYROCERAM being a hard ceramic material.

Therefore, as radome 10 of Epperson is hard, whereas the main body of claim 1 of the present application is soft, claim 1 of the present application does not read on radome 10 of Epperson.

Second, claim 1 of the present application does not read on ablative layer 18 of Epperson for the following reasons:

(1) Claim 1 of the present application, claims a main body and an attachment arrangement for releasably connecting the main body to the missile. Ablative layer 18 of Epperson is bonded (column 3, lines 48-50) or applied as a spray paint (column 4, lines 42-47) to the surface of shell 16. Ablative layer 18 of Epperson does not have an attachment arrangement for releasably connecting ablative layer 18 to radome 10. Ablative layer 18 of Epperson is released from radome 10 via ablation only and not by release of an attachment arrangement.

(2) Claim 1 of the present application now includes the limitation that “attachment arrangement is configured such that, a release of the main body from the projectile is at least partially non-ablative”. As stated above, ablative layer 18 of Epperson is released from radome 10 via ablation only.

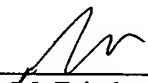
Therefore, claim 1 of the present application does not read on ablative layer 18 of Epperson.

Therefore, claim 1 of the present application apart from being novel over Epperson is not even obvious in light of Epperson as Epperson does not teach a

missile cover which is soft on release and is attached to a missile via an attachment arrangement configured for non-ablative release of the cover.

In view of the above remarks it is respectfully submitted that independent claim 1, and hence also dependent claims 2-9, are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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Date: July 29, 2004